On some noteworthy Indian Birds.—By F. FINN, B.A., F.Z.S., Deputy Superintendent of the Indian Museum.

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In the present paper I deal with a few occurrences of Indian birds noteworthy either on account of the rarity of the species, or by reason of their presence outside their usual limits. Most of the specimens alluded to are in the collection of the Indian Museum.

I follow the nomenclature and arrangement of the British Museum Catalogue of Birds.

Rhytidoceros narcondami.

When at the Andamans in April, 1896, I obtained, through the kindness of Majors Temple and Graham, and Lieutenant E. C. Doughty, four specimens of this rare species, which had been recently obtained on Narcondam. The skins had been only roughly prepared, and not sexed, but the plumage and dimensions show them to be those of two males and two females. They are all moulting.

The colouring corresponds well with that given by Mr. Blanford (*Fauna of British India*, Birds, Vol. iii, p. 149), and Mr. W. R. Ogilvie Grant (*Cat. Birds Brit. Mus.*, Vol. xviii, p. 386). The tails are dirty, this no doubt being the grey stain noted in the British Museum catalogue description.

I take this opportunity of expressing my obligation to the Andaman residents for the kind hospitality and assistance afforded me on my visit to the Islands.

Phasianus humiæ.

In December last Lieutenant-Colonel H. St. P. Maxwell, of the Indian Staff Corps, very kindly presented to the Museum a skin of this rare Pheasant, which he had obtained in the preceding month at Kairong in Manipur.

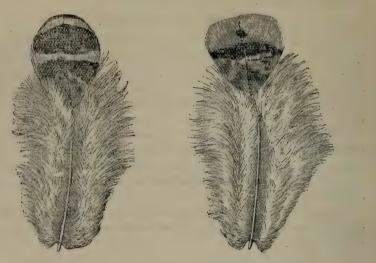
The specimen, which is in the plumage of the adult male, agrees very well with the description in the British Museum Catalogue of Birds, Vol. xxii, p. 336, and with Mr. Hume's original description (*Stray Feathers*, Vol. ix, p. 461), except in that the longer upper tail-coverts are not plain grey, but are crossed by narrow dull chestnut bars.

Colonel Maxwell's specimen differs much more from a fine male from the Ruby Mines, the only other example of this species which the Museum possesses, being that mentioned by Mr. W. L. Sclater (see *Ibis*, 1891, p. 152).

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In this latter the white fringing of the lower back and rump feathers is so extended that the general appearance of these parts is silver-white, irregularly mottled with black where the more basal colouring of the feathers appears, whereas the other bird's plumage shows here a beautiful scaled effect. Moreover the webs of these feathers in the Ruby Mines specimen are looser, and they are squarer at the tip. The difference in the individual feathers is shown in the accompany'ng woodcut, (which, however, much exaggerates the slight black terminal fringe in that of the Manipur bird.)



Manipur specimen.

Ruby Mines specimen.

Also in the Ruby Mines specimen the white shoulder-patch is larger and almost devoid of dark markings at the tips of the feathers. In this specimen also the longer upper tail-coverts, and to a less degree the grey part of the tail itself are of a lighter grey than the same parts in the Manipur bird.

Seen together with Colonel Maxwell's bird, the Ruby Mines specimen seems worthy of specific separation, that is to say, as species are reckoned in the genus *Phasianus*. With a larger series of *P. humiæ* however, the points I have mentioned would very possibly be found variable, and hence I content myself with drawing attention to the peculiarities of this bird, in hopes that other naturalists may be led to investigate the subject.

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Limnocryptes gallinula.

We are indebted to Major F. Graham for a specimen of the Jack-Suipe from the Andamans. The bird was shot, according to Major Graham, near Aberdeen on the South Andaman Island, on November 25th, 1896, by Lieutenant H. Turner of the Suffolk Regiment.

Jack-Snipe were unusually abundant in the Provision Bazaar this cold weather, and the Messrs. Dods inform me that they also found them singularly plentiful when out shooting in the vicinity of Calcutta.

Anas boschas.

In February, 1895, Mr. R. G. Hanland, of Gauhati, Assam, sent to the Editor of the *Asian* newspaper a Mallard which had been shot by Mr. Truninger at Gohpur near Behali Mukh, North Luckimpur, in Assam, on the 17th of that month. The bird was sent to me, and I was able to confirm Mr. Hanland's identification of it. It was in adult male plumage, but not having been properly cured, the skin began to come to pieces, and I therefore did not preserve it, as the species was unmistakeable.

Eunetta falcata.

A bird-dealer from the Bazaar brought me a male of this species on January 3rd of the present year. It was in full plumage with the exception of the long tertials, which were only just sprouting, and not noticeable unless looked for.

As it was not in very good bodily condition, I had it killed for the Museum collection. It had the bill black; iris dark brown; feet dull grey, with black webs. The testes were small, and the windpipe much resembled that of the common Teal as figured in Yarrell's British Birds, Fourth Edition, Vol. IV, p. 391.

Nyroca baeri.

Fuligula baeri. Finn, P. A. S. B., April 1896, p. 61.

This Pochard again occurred in the Provision Bazaar here during the present cold weather, but in far greater numbers than on the previous occasion, when all I saw, to the number of eleven, were obtained, as recorded *loc. cit.* This time the earliest date on which I observed any was November 25th, 1896, and I continued to note their presence pretty constantly till January 5th, after which I have no record of their occurrence. For a few days, not long after their first appearance, they were quite one of the common ducks of the Bazaar, being as numerous as White-eyes (*N. africana*). Out of perhaps twice that number seen, I bought in all twenty-nine specimens, twelve of which were transferred (not all immediately, however,) to the Museum collection; while three, a male and two females, remain at large on the tank in the Museum compound, and a pair are still living in the Dack House at the Alipore Zoological Gardens, where several seem to have died, as I sent more there at different times.* Some birds were lost in various ways. Most of the birds observed were in immature plumage; I saw a few full-plumaged females, but no full-plumaged male.

The immature female is very like N. africana of the same age and sex, but differs from it in the dusky crown, and the absence of any rusty hue about the head except on the face. The size usually furnishes a better distinction, but I have seen some unusually small, though apparently clean-moulted, females, one of which is among our series obtained on this occasion. This bird is not larger than adults of N. africana, but is at once distinguishable by the above-noted limitation of the rusty hue, and the generally dusky blackish head and neck, whereon, however, are only faint indications of a green gloss.

All the males I saw had white irides, with the exception of one in which they were of a pale cloudy greenish-yellow. The white eye appears early, for I have noted it in specimens which were only just beginning to change the immature plumage for that of the adult. The young male appears (I have no preserved specimen of a very immature male) to have the same plumage as the young female. The bird on the Museum tank was pinioned and turned out there on December 13th, 1896, when only just beginning to change, and when caught on February 26th, 1897, was in full plumage, or nearly so; so also were two females caught with him, which were preserved, while the male was again released. Unfortunately I do not know exactly at what stage these females were turned out, but I am sure they were not in full plumage.

In all the females I saw the irides were brown, with the exception of two, which had the irides grey, and a mixture of brown and white, respectively.

The bills of the males are dark grey or greyish black, with a black nail and a grey patch at the tip: in the female the bill is darker, with the grey patch less distinct. The feet in both sexes are grey, with dark joints and black webs.

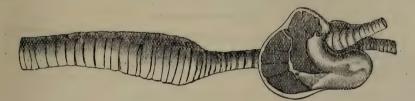
As to the habits of this duck I have little to say. In general appearance it is lighter and less "dumpy" than its near ally N. africana; the head and neck and general shape are less Fuliguline than in that species, and recall a Mallard somewhat. It of course swims

* These are now dead; the species does not bear confinement in an aviary well, unlike N. africana, which thrives better than any other Pochard. N. baeri is also more restless on the water when on a tank, judging from the three birds I still possess. From the male of these and the bird that recently died in the Zoological Gardens, it appears that the male in summer assumes the rusty facial patch of the female, and both become duller.

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and dives excellently, and is a less clumsy walker than the common White-eye. The male has a curious habit of contracting its neck and jerking it backwards in a curve—no doubt a pairing-gesture. The lower part of the windpipe of the male is shown below, of about natural size.



Erismatura leucocephala.

Two birds, an immature male and a female, of this species, were obtained in the Bazaar during the late cold season. The female was in a dying state when seen, and died by the time the bargain for it was concluded.

The male, for securing which I am indebted to our taxidermist, Mr. C. Swaries, lived for three days, but one of its legs was hopelessly injured, and it either could not or would not eat, although I tried it with several different kinds of food, in the hope of studying alive so interesting a species. Ultimately I reluctantly had it killed and preserved.

It was about the tamest bird I ever saw, continuing to dress its plumage even when being handled; in fact, its remarkable freedom from fear and its care of its feathers reminded me strikingly of a Grebe. (several of which I have also had) just as its habits when at large reminded Cauon Tristram (fide Dresser, Birds of Europe) of those birds. From the attempts it made, despite its injuries, to stand up, I have no doubt that it is able to do so, and probably to walk also, though doubtless it is not active on land. It floated low in the water, but not submerged, and the tail was kept more or less raised above the level of the back. This male had the throat entirely white and the black on the front and sides of the neck below this finely vermiculated with white; the back plumage is very pale, almost creamy in ground-tint, with chestnut feathers showing up here and there. The female was very much darker above, as well as more rufous. Her bill was black. while the male's was dull grey, somewhat greenish at the base. In both specimens the feet were grey with black webs, and the irides very dark brown. The windpipe of the male is expanded in the middle and narrowed towards the ends, but has no bulla ossea.

Merganser comatus.

A specimen of a Goosander, in very bad condition, sent to me in March of the present year by the Editor of the *Asian*, with the information that it was shot at Myitkiyana, Burmah, appears to me to be referable to the Eastern form. It is a female or young male.

Merganser serrator.

There is in the Museum collection an excellent specimen of this bird, not sexed, but by plumage a female or young male, obtained in the Calcutta Provision Bazaar on December 17th, 1889.

Contributions to the Theory of Warning Colours and Mimicry. No. III. Experiments with a Tupaia and a Frog.—By F. FINN, B.A., F.Z.S., Deputy Superintendent in the Indian Museum.

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The only other animals, besides birds and *Calotes* lizards, with which I have systematically experimented, are a Tupaia or Tree-Shrew (*Tupaia ferruginea*), and a Bull-frog (*Rana tigrina*); in each case a single individual only being used.

This being the case I have thought it as well to give the experiments on this Mammal and Amphibian together in one short paper, before dealing with the rest of the birds, my notes upon which much exceed in bulk all those I have hitherto published taken together.

EXPERIMENTS WITH A TUPAIA.

The Tupaia used in these experiments was bought in the Bird Bazaar, in July, 1895, and kept for most of the time in the aviary which I had used for birds: it was fed on boiled rice, fruit (plantain) and cooked meat. It used its fore-paws to hold the insects it ate, after the manner of a squirrel, and from its tameness and keenness after insects was a very satisfactory subject to observe. With it I made the following experiments, in 1895, about the time at which some of my experiments with *Calotes (J. A. S. B.*, 1896, *Part II*, p. 42) were made.

July 15th. The animal being hungry, I offered it a Danai. genutia, which it took, but refused, apparently disliking the taste. I then gave it three non-warningly-coloured butterflies, which it was even less inclined to eat. All these insects were dead and rather dry however.

The animal had an hour or so before eaten cockroaches (Periplaneta americana) and plantain with relish.